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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/766,295 | 01/27/2004 | Guy E. Horne JR. | 02579-P0027B | 9340 |

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| EXAMINER |
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KASZTEJNA, MATTHEW JOHN

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| ART UNIT | PAPER NUMBER |
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3739

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| MAIL DATE | DELIVERY MODE |
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11/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---|-------------------------------------|--|
| Office Action Summary | Application No. 10/766,295 | Applicant(s) HORNE ET AL. | |
| | Examiner MATTHEW J. KASZTEJNA | Art Unit 3739 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the Appeal Brief filed on August 21, 2008, PROSECUTION IS
HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the
following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply
under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed
by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and
appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth
in 37 CFR 41.20 have been increased since they were previously paid, then appellant
must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by
signing below:

/Linda C Dvorak/

Supervisory Patent Examiner, Art Unit 3739

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,275,152 to Krauter et al. in view of U.S. Patent No. 6,749,560 to Konstorum et al. in further view of U.S. Patent No. 6,540,669 to Abe et al.

In regard to claims 1 and 12-13, Krauter et al. disclose an endoscope insertion shaft comprising: a tubular member 21, and a sheath comprising at least the following layers: a braided layer 23 and a wear layer 24, wherein the braided layer jackets the continuous wall of said tubular member; and a barrier layer 22 comprising a polyester wrap is disposed between the continuous wall of said tubular member and the braided layer and jackets the tubular member to form a seal therebetween along the length of the tubular member (see Figs. 2 and 4 and Col. 3, Lines 40-67). Krauter et al. are silent with respect to the tubular member including a continuous wall to form a closed interior and wherein the wall includes at least one aperture for increasing flexibility. Konstorum et al. disclose an analogous endoscope 10 having a shaft 14 comprised of a frame 26 and a cover 32 (see Figure 1). Frame 26 comprises a tube 40 that is preferably formed from a shape memory alloy material, such as Nitinol (see col. 3, lines 10-25). **In regards to claims 2-3 and 6-7**, tube 40 has slots 46 along at least part of its length where the pattern of slots can be varied and sections of slot patterns are provided, to vary the flexibility of the tube 40 (see col. 3, lines 29-51). The slots 46 provide the tube 40 with increased flexibility along the length of the first section 52 of the tube 40 (see col. 4, lines 1-5). It would have been obvious for one of ordinary skill in the art at the time the invention was made to replace the helical tubular member of Krauter et al. with a continuous wall tubular member to provide an easily manufactured one-piece tube

Art Unit: 3739

with adequate column strength, flexibility and torque resistance to be inserted into a patient's body as taught by Konstorum et al.

In further regard to claims 1 and 10-11, Krauter et al. teach of an outer most wear layer 24 of polyurethane of sufficient thickness to form an outer skin for the insertion tube body 15 (see Col. 3, Lines 45-49) but are silent with respect to a laminating layer disposed between the wear layer and the braided layer. Abe et al. teach of an analogous endoscope having an outer cover 3 formed into a laminated structure which includes an inner layer 32, intermediate layer 33 and an outer layer 34. In the outer cover 3, one of the inner layer 32, the intermediate layer 33 and the outer layer 34 is made of a material having different physical and chemical properties (referred to collectively as the "material properties") than any one of the other layers. Examples of physical properties include stiffness (flexibility), hardness, elongation percentage, tensile strength, shear strength, flexural elasticity, bending strength and the like, and examples of chemical properties include chemical resistance, weather resistance and the like. Furthermore, the outer cover 3 may alternatively be constructed from just two layers (e.g., the intermediate layer 33 can be omitted, and just the inner layer 32 and the outer layer 34 can be used) (see Col. 12, Lines 58-64). The inner layer 32 is formed at the innermost peripheral side of the outer cover 3 so as to make contact with the core body 2. Accordingly, the constituent material of the inner layer 32 is preferably chosen to have excellent adhesion with the core body 2 (in particular, the coating layer 231 of the reticular tube 22). Further, the inner layer 32 is preferably formed of a material suited for forming protruding portions 31 having appropriate size

Art Unit: 3739

(length), shape and number (see Fig. 5 and Col. 10, Lines 44-65). Thus, Abe et al. disclose a laminating layer 32 disposed between the outer layer 34 and the braided layer 22. It would have been obvious for one of ordinary skill in the art at the time the invention was made to include a laminated layer between the wear layer and braided layers in the apparatus of Krauter et al. to control the resilience and durability of the flexible tube as taught by Abe et al.

In regard to claims 4-5, Krauter et al. are silent with respect to wherein the first set of apertures comprises at least one elongated aperture having an axis oriented at an angle to the axis of the tubular member and wherein the angle is in the range from zero to ninety degrees. Figure 3 of Konstorum et al. shows that the slots 46 are positioned along a line parallel to the axis of the tube 40 and have an axis oriented at an angle to the axis of the tubular member, where the angle is in the range from zero to ninety degrees. Figure 3 also shows that the slots 46 are circumferentially positioned on the tube 40. It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the endoscope of Krauter et al. with various patterns of apertures in order to vary the flexibility of the tube to a desired stiffness as taught by Konstorum et al.

Response to Arguments

Applicant's arguments with respect to claims 1-7 and 10-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. KASZTEJNA whose telephone number is (571)272-6086. The examiner can normally be reached on Mon-Fri, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. K./
Examiner, Art Unit 3739

10/30/8

/Linda C Dvorak/
Supervisory Patent Examiner, Art Unit 3739

Application/Control Number: 10/766,295
Art Unit: 3739

Page 7